WSC ISS 50 Mbps Line Outage Recording

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Background

- Per WSC specification Local Interface data transport utilized by ISS is not required to provide line outage recording (LOR)
- LOR for ISS (per ISS NPRD) implementation required prior to ISS 5A.1 install (STS-102/March 2001)
- ISS interim recording solution implemented utilized Sony Recorders for LOR
  - » Sony Recorders originally purchased to support McMurdo Relay High Rate playback
  - » Recorders used by MTRS on a as need basis
- ISS LOR methodology implemented fulltime recording
  - No playbacks of ISS data requested (July 2001 oldest record in log for user playback)

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Problem

- Sony recorders began experiencing problems after ≈13 months of full time recording
  - » Recorder “A” began experiencing record failures on 28 May 2002, removed from service on 4 June 2002
  - » Recorder “B” began experiencing record failures on 26 April 2002, removed from service on 22 July 2002
- Recorders were sent to California repair facility for maintenance
  - » Recorder “A” Variable Rate Buffer and Recorder repaired at cost of $2150
  - » Recorder “B” Inner Drum and associated Record and Reproduce Heads were completely worn, out repaired at a cost of $7500
  - » Approximately one month time to repair for each unit

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LOR Operations

- Following the failure of Recorder “A” an ISS ISI #22 was issued to change LOR recording to an “On Request” basis
  - » There have been no requests in the period since the ISI has been in effect
  - » The Sony recorders are maintained at WSC in a standby mode and easily configured to record (callup per ISI is 15 minutes)
- WSC recommends that LOR operations continue on an “On Request” basis
  - » Minimize wear to due full time recording
  - » Reduced maintenance cost
  - » Recorders PM’d monthly to verify record/playback capability

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Future Plans

- WSC LOR will be replaced by a Raid Array Storage System
  - » Raid will provide full time recording of High Rate and Low Rate data
- 4 terrabyte total storage capacity
  - » Two 50 Mbps data streams (ISS/STS) for 50 hours
  - » 8 Mbps for 120 hours (MDM users)
- Capability to offload data for long term storage
- Planned for implementation in July 2003